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# THE INNER FREEDOM OF AMERICAN INTELLECTUAL LIFE

BY PAUL S. REINSCH

United States Minister to China

THE proper relation of science to utility is a question upon the solution of which the freedom of intellectual life and development in our country depends. While that freedom is primarily the result of inner strength, yet it is also influenced by external conditions, either through direct and conscious intervention or through that indefinite yet all-pervading influence which is exerted by the social and political atmosphere. In our new country, where the practical mastery over the forces of nature and the control of resources constitute the most important business of mankind, and where the human spirit has not yet become primarily reflective and philosophical, intellectual and scientific impulses are affected by the activities of material development and construction.

It is, of course, unthinkable that scientific and educational activities should in any country remain uninfluenced and uncolored by the fundamental character of the social and political constitution of the State. While the starting-points, postulates, and premises of detailed investigation ought, indeed, to be dominated solely and entirely by a determination to discover the truth and to construct a system of knowledge resting upon the broadest possible basis of induction, yet, in the critical valuation of results and in the adaptation of scientific knowledge to life, it is inevitable that the fundamental convictions of ethics, political thought, and social aims should have their influence so long as reason cannot be entirely dissociated from will nor human nature lead an abstract existence in some scientific Utopia. This does not affect the discovery and statement of facts, but their interpretation; and it is also not without its influence in determining the relative grouping of different sciences in the sum total of national intellectual life.

It may probably be said that American learning is freer from subconscious postulates than is that of Europe; in our national life there are represented so many different traditions, feelings, and aspirations that the specific substratum of psychology has not yet so definitely taken shape. The American ideal of instruction and investigation demands that there shall be an accurate perception and concrete presentation of positive facts, with clear-sightedness and thoroughgoing truthfulness of expression. Moreover, it is expected that it should be made clear what is the truly fundamental, generally accepted body of any science, and that when interpretative valuations of facts and theories are offered it should be with the express reservation that the ascertained data might possibly also lead to other conclusions.

It is partly for this reason that American universities have thus far perhaps not been productive of commanding personalities among the teachers in the same measure as the great academies of Europe. Moreover, the constitution of our universities emphasizes co-operation rather than rivalry and competition. In the expression of opinions a rather impersonal tone is cultivated, to the extent frequently of being coldly neutral. Yet, with the escape from the older learning by rote and from the more recent domination of the isolated fact, American universities are beginning to offer opportunities to men who have the power to interpret great bodies of data and the insight to supply the general hypothesis by means of which still further fields may be opened to science. Thus, also, there will be a place for the man who, from the high and secure ground of scientific knowledge, will address himself directly to the intellectual and spiritual needs of his hearers and help them to form their ideals, as well as their intellectual methods, upon the realities of life.

But is the *milieu* of American politics and society favorable to the cultivation of intellect and science? No American institution can be independent of public opinion and public support. If it were, it would cease to be American. Even the great universities of the Eastern States, which are so liberally endowed, cannot avoid this influence; should they desire to make themselves in any sense monastic enclaves, their own force and vitality would soon disappear. But the influence of the social environment bears most directly upon the Western

State universities. They may indeed be said to be most truly American as representing a thorough identification of the public spirit with the most far-reaching purposes of science and education. To Europeans it seems almost startling that these institutions should be subject to the good-will of a popular majority; and at first sight it would seem to be but an insecure foundation for a long-sighted development of scientific work that every year or two the entire university work becomes dependent upon what the two hundred or three hundred merchants, farmers, mechanics, educators, and lawyers in the legislature may conclude to grant. At such times when the attacks of many private interests converge upon it, the university may indeed appear to be going straight to destruction. But then, almost invariably, the underlying common sense of the average citizens and their trust in intellectual ideals asserts itself, with the result that the support of higher education never fails.

It would, of course, be futile to deny that notwithstanding such liberality there is always a danger that the power of public opinion may at times not favor, but restrict, the free development of science. As one authority has put it:

> The supreme test is whether the people of the State will on the one hand tax themselves to support it, and on the other impose upon themselves a self-denying ordinance to leave it severely alone, so that it may select its own intellectual standards and the members thus chosen may be absolutely free to set forth whatever they believe to be the truth.

Possible conflicts are most likely to come about in connection with the social sciences, as there are always interests which prefer the twilight of prejudice to the light of reason. But it is doubtful whether any attack upon fearless teachers of social and economic science could have more than a passing effect, so long as the respective scientists and teachers are conscious of their duty to ascertain by adequate induction a sure foundation for their scientific theories, and so long as they will frankly deal with personal opinions as provisional. Should, however, any such attack assume a serious character, the economists would be assured of the integral support of representatives of natural science. The latter are for the time being fairly exempt from such dangers. The acceptance of their results is a matter of mathematical and experimental method; and questions of hypothesis and general interpretation are dealt with in so esoteric a manner as to be understood only by specialists.

But in the social sciences every one feels competent and desires to have his say; for this reason there is a special need for developing the exact part of these sciences according to strictly positive methods. When we consider how far subjective impulses have formerly been dominant in these branches, it is undoubtedly a good and desirable thing from every point of view that the positive side should be more strongly emphasized.

Closely connected with this matter is the relation of university teaching to the general morality of society. In Europe and the Orient there is a conflict between what has been called class moral and mass moral. Shall society apply a uniform moral code to all its members, or are there exceptional positions which are free from the general moral duties? From the character of our American social constitution it is plain that we as a nation must decisively adopt the first alternative—in a country where the door of progress is open to every one, where personal independence is developed, where the entire people participate in the ideas and sentiments of the day, any other position would be impossible. Abroad this is not generally understood, and American morality is often considered hypocritical. But the fact is that whatever with us receives any sort of public sanction is thereby impliedly commended to the entire people for acceptance and emulation. It is, therefore, impossible in matters of conduct to bestow privileges and exemptions upon certain classes. This explains the condemnation of performances which may in other countries be permitted for the purpose of select artistic circles; it explains the cold reception accorded Maxim Gorky when he visited America with his reputed mistress, and it even explains, though it does not justify, such an extreme case as the police interdict of the performance of "Salome" in Chicago. The question is not whether a certain work of art or a certain individual act or relation could be looked upon as an interesting and unique expression of artistic temperament, but whether in a country where life is so much in the open as in the United States, public morals will not suffer more than artistic development will gain through special dispensations and liberties. I sincerely hope that this will not be understood as favoring a narrow-minded control and censorship of really fine dramatic art, which usually grants full license to the most insincere and sensual productions as long as they conform to certain superficial conventional standards. What has been said concerning public morality in general imports certain limitations with respect to American universities. They are not favorable to the development of exclusive cults. Nor would it be desirable that in the name of artistic refinement or recondite research currency should be given to things that are destructive to the foundations of public morality.

The activities of American universities are influenced especially through the manner in which science has allied itself with social and industrial purposes. Our universities have other aims than their European models. Their purpose is not only to develop science and to furnish thorough preparation for the learned professions, but to make science directly useful in every human activity and interest. This is to be achieved not only through intensive study of the conditions and methods of any activity, thereby clarifying its underlying theory and raising its practice to a higher plane; but also through direct instruction of the people employed in the different industries, so that they may be able to utilize the results of scientific methods and discoveries. This procedure was first used with great effect in agriculture, but it is now extended practically to all fields of human enterprise. The impulse to carry the advantages of scientific method into all parts of human activity is the outstanding characteristic of modern American university work.

By many this alliance with utility is looked upon as a danger to pure science, and especially to culture, in as far as it is represented by the studies known as the humanities. But if technical and professional education is inspired with the enthusiasm of pure science, it will do far more than to teach a trade; it will awaken broad interest in the solution of scientific problems and in the methods for gaining greater efficiency. Students are made to see how plants, animals, and economic processes may be improved. In their activities they are led to have before them an ideal which is constantly influencing their work and is realizing itself through their efforts. It follows that men thus educated are open also to other ideals relating to conduct, art, and literature, to good and wholesome arrangements in social institutions. Thus it comes about that the creative impulses of art and philosophy often find more encouragement among men whose education has been along so-called practical lines than among those who have been surfeited with the humanities.

The main question is, however, whether the development of pure science is helped or hindered by this alliance with practical work. It is certain that the men whose work lies in applied science and who thus in a way mediate between scientific investigators and the general public will be first to recognize and maintain the necessity of pure science. Far from claiming for themselves alone the abundant means and opportunities, such men are always anxious to assist the representatives of pure science in the fulfilment of their purposes. This co-operation of pure and applied science, through interesting the public at large in scientific work, brings about an abundance of support, so that adequate means are put at the disposal of scientists. It is not, however, these material means that constitute the real gain, but the fact that thousands upon thousands who have felt the influence of science in their life-work may be counted upon as willing co-operators in the development of our national scientific life.

We must here also touch upon the relations which have been established between scientific work and the government of the State; the more deeply the latter affects the activities of a people, the more it is bound to utilize scientific knowledge. Governments may either employ scientific coadjutors directly, giving them positions as public officers, or they may call upon experts to give their counsel and assistance as it may be required. The Federal Government of the United States has mainly followed the former, the State governments the latter, alternative. The scientific work carried on by the central Government has assumed a notable scope. In all the departments scientific men are employed; especially large numbers, however, serve in the Departments of Agriculture, of Commerce, and of the Interior. So many experts in botany, zoology, chemistry, engineering, economics, and political science are engaged in Government work that Washington has become one of the first seats of scientific activity, and the Cosmos Club a learned society. The Department of Agriculture alone expends annually in scientific research a sum of money which nearly equals the budget of all the German universities taken together. Whether the direct employment of scientific assistants is the best method by which the State can foster scientific investigation has sometimes been questioned. The regimentation which is inevitable in governmental work limits the freedom of movement of the expert, so that the conditions are not perhaps most favorable for individual and intensive work leading to great discoveries. Yet from the point of view of the Government itself, it is undoubtedly of the highest importance that it should in this manner provide a thoroughly reliable foundation for its action.

As the different commonwealths develop their activities the demand for scientific counsel makes itself felt there too, and it is natural that the State universities should be called upon to assist the governments. As they are making themselves useful to the general public by affording scientific assistance in the development of economic enterprises, so they are now assisting the State itself, putting at its disposal whatever expert ability may have been attained by the members of their faculties. The elaboration of methods of taxation, the dealings with labor, sanitary reforms, municipal utilities, the protection of agriculture against animal and plant diseases—in all these matters the State seeks to profit through the scientific knowledge accumulated at the university. In this way the State university becomes both in the private and the public affairs of the commonwealth an instrumentality for bringing human experience and knowledge scientifically digested to bear on all the problems of life. Though strongly combated by certain private interests which, to put it in their own form of thought, believe that the experience of men of business is a safer guide than the expert ability of men of science, and which oppose co-operation, the system has nevertheless established itself on account of its utility; and few people continue to dispute the right and duty of the university to assist in the work of building up the industrial, commercial, agricultural, social, and artistic life of the commonwealth. In turn, the necessity of having concrete reality always before their eyes and of remaining conscious of the relation of scientific work to the welfare of the commonwealth, has a vitalizing effect upon investigation and instruction in the universities.

But how is the productive power of American science affected through all these relationships and conditions? When American learning began to depart from modest imitation, when it began to take up the direct investigation of materials at hand, it was at first powerfully influenced by German scientific methods, taking as its model the German institutes of research. Various currents met at this point, with the result that American scientific work became peculiarly positive and matter of fact. The tendency lay towards the useful, the visible, the concrete; men worked with atoms, with masses of facts, and there was a certain dispersion of mental energy as individual investigators busied themselves preferably with very minor problems. The students liked to arrange a number of well-authenticated facts like pearls on a string, without organic connection.

The experience of one of the first group of Rhodes scholars in Oxford will serve to illustrate some distinctions. When asked to write a paper on an historic subject, this ambitious young man assiduously gathered the facts from numerous treatises and source books and presented them in a conscientious résumé. When the finished product was read, the tutor listened patiently and commended the industry of the student; but he admitted that the result was not what was wanted, and asked that the paper be entirely rewritten in such a manner that, without adducing all the facts, their presence in the writer's mind could be inferred. After a considerable amount of thought the student changed his methods, reading less and using chiefly secondary authorities, but concentrating his efforts on the presentation of his thought. English education has in the past been designed to produce masterly men, who would be able at any time to shine in Parliament or on the tribune, without having deeply delved in original materials. In America, on the other hand, the purpose has been to produce workmen whose results would be reliable. As far as this went, it was surely a good beginning.

The application of the positive method, which was transposed from the physical to the social sciences, often tended to secure trustworthiness at the expense of originality and illuminating insight. Also, it seemed frequently to be not so much the purpose to discover something not known before as to dig up scraps which had in the course of time happily been forgotten; or energy was spent in proving beyond all possibility of doubt something which it had never before occurred to anybody to question. In this desire for research and for specialized studies it was often forgotten that college and university study is, after all, preparatory—an introduction to life and science. Young students who had not yet mastered the essentials of human history and science were set to carry on advanced research; and as they had not yet achieved a sufficient command of their science or of its methods, as well as of associated disciplines, it is not remarkable that their work left very much to be desired. Even now we have not entirely left this stage of development; we still have to fight for the time necessary for a solid scientific preparation. Young men are too impatient to begin what they imagine to be their real life-work. They yearn for results properly their own, produced by their own labor, so that they are not often willing to spend the time and energy necessary to master thoroughly the traditional capital of their science.

On the other hand, however, this desire for action and this love of positive research carry with them many good things; in fact, they are the foundation upon which American science will be built up to its full height. The hammering energy of these primal motives is now being modified by other ideals. We have passed from an analytical, atomistic age into one given to synthesis and constructive thought. Thus, in the science of history there is an insistent demand for artistic presentation and illuminating interpretation, based upon carefully controlled preliminary research. The artistic temperament which inspires also the best work of the men of science is beginning to manifest itself in all branches of intellectual work. We have the right to expect that much good will come from the qualities which American science has developed during its first stage. Even as the influence of realism in European art has made for ever impossible the superficiality and insincerity of the preceding epoch, so we may be assured that the synthesis of American science will be received by the world with confidence based upon a knowledge of its thorough methods. American science has a point of contact in the positivism of European science, as represented by the great realists from Aristotle to Helmholtz, but it is a positivism that is generated from native energies.

The constructive, creative stage upon which American science has now entered is but a resultant of the new forces which have manifested themselves throughout America in the appreciation of national culture as the fullest expression of national life. Science and literature too have at length become national. No longer satisfied with the faithful gathering of detail or adaptation to new conditions of an older learning, they realize their mission as national, and set their aim to work toward a synthesis of data, factors, and thoughts which will constitute an American scientific consciousness. They also discern, as this is being achieved, the full implications of membership in the international community of human scientific endeavor, no longer occupying the position of the student or learner, but in association with compeers, ready for a mutual interchange of achievements.

All this is favorable to freedom, yet it cannot be denied that in the very opportunities of American science, with their vast perspective of things to come, certain dangers exist. A huge mechanism has been created; standardization is the word, and the careful measuring of efficiency. With all this complexity, scientific achievement is indeed favored through the abundance of means at hand, but true mastery is, after all, dependent upon personal qualities, which can be preserved and developed only by constantly putting personality above mechanism. In the earlier ages great personalities achieved remarkable results with the scantiest means. In our own present, the enthusiasm of the American people, the readiness of all classes to make sacrifices for education, have placed unrivaled means at the disposal of men of science. Whether these are to be used with approximately the same success as was the modest apparatus of earlier science and investigation, will be determined by the intensity of purpose with which the ideal of pure science, of living truth, of the primacy of thought, can be kept active in all intellectual work.

PAUL S. REINSCH.